

REMARKS AND ARGUMENT

Disposition of the claims:

Claims 97-109, 134, and 135 are pending in the application.

Claims 99, and 101-103 are currently withdrawn in accordance with a species election.

Claim 135 is cancelled by way of this amendment.

New claims 134, 136 and 137 are introduced by amendment. No new matter has been introduced by addition of these latter claims.

Accorded effective filing date:

The Examiner has accorded the effective filing date of January 29, 2002 based on PCT application PCT/US02/02562. Office action at item 2. Applicants respectfully traverse this assigned effective filing date and submit that the claims are fully supported by earlier provisional application 60/316,501 ('501 application) filed August 31, 2001, to which the PCT application properly claims priority. The Examiner has inadvertently mischaracterized the chemistry used to modify the nanotubes in the '501 application leading to an erroneous assignment for the effective filing date. The phenol-, thiophenol-, and aniline-presenting modified nanotubes were all made by the same process described in the present disclosure through diazonium coupling chemistry. In fact, the diazonium coupling chemistry is a common thread through each of the four provisional applications to which priority is claimed in the PCT application.

Status of parent U.S. application

The specification has been amended to state the current status of parent application number 10/470,517. See office action at item 3. This application is pending and a notice of allowance has been received. As of this response the issue fee has not yet been paid.

Rejections under 35 U.S.C. 112, 2nd paragraph

Claim 135 has been rejected under 35 U.S.C. 112, 2nd paragraph. Office action at items 4 and 5. This claim has been cancelled by amendment. This rejection is therefore moot.

Non-statutory double patenting rejections

Claim 97, 98, 100, 104-109, 134, and 135 are provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 97-109 of co-pending application number 10/632,419 in view of Bahr et al. (Journal of the American Chemical Society, 2001, 6536-6542). Office action at items 6-8. Applicant respectfully traverses this rejection. Applicant notes that, if the "provisional" double patenting rejection is the only rejection remaining in the Application, then the Examiner should withdraw the rejection and permit the Application to issue as a patent. M.P.E.P. §804. As to claim 135, this rejection has been rendered moot by amendment canceling the claim.

Claim 97, 98, 100, 104-109, 134, and 135 are provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-3, 6 and 15 of provisional application number 60/598,090 in view of Bahr et al. (Journal of the American Chemical Society, 2001, 6536-6542). Office action at items 9-10. Applicant respectfully traverses this rejection. Applicant notes that, if the "provisional" double patenting rejection is the only rejection remaining in the Application, then the Examiner should withdraw the rejection and permit the Application to issue as a patent. M.P.E.P. §804. As to claim 135, this rejection has been rendered moot by amendment canceling the claim.

Rejection under 35 U.S.C. 102(a)

Claims 97, 98, and 100 are rejected under 35 U.S.C. 102(a) as being anticipated by Bahr et al (Journal of the American Chemical Society, 2001, 6536-6542). Office action at item 11. This rejection is respectfully traversed. Applicants submit along with this response affidavits under 37 C.F.R. 1.132 from the living authors of this publication stating that the work presented therein is that of the inventive entities of the present application and thus does not qualify as a publication by "another" under 35 U.S.C. 102(a). The discrepancy in authorship is the result of a proper inventorship determination (MPEP 2137.01) which results in the application properly naming only the inventive entities on a claim by claim basis. No such authorship guidelines exist in journal publications, where authorship is typically discretionary on the part of the lead author. Peer-reviewed journal author listings frequently include, for example, co-workers that

were directed to assist in carrying out reduction to practice of the invention without actual contribution to conception. Withdrawal of these rejections are respectfully requested.

Rejection under 35 U.S.C. 103(a)

Claims 97, 98, 100, 104-109, 134, and 135 are rejected under 35 U.S.C. 103(a) as being unpatentable by Bahr et al (Journal of the American Chemical Society, 2001, 6536-6542) in view of Smalley. Office action at items 12-14. This rejection is respectfully traversed. As described above Bahr et al. does not qualify as a publication by "another" under 35 U.S.C. 102(a).

A prima facie case of obviousness consists of three elements:

"There must be some suggestion or motivation . . . to modify the reference or combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."

Smalley on it's own does not teach nor suggest the limitations of independent claim 97. Smalley describes functionalization of carbon nanotubes at tube ends in column 19, lines 18-25. The "known reaction schemes" referred to in the Smalley patent are reaction of the pendant carboxylic acid functional groups presented at the opened, etched ends of carbon nanotubes after oxidative treatment. Thus, for functionalization Smalley degrades the carbon nanotube to provide functional group handles at the end caps. Smalley does not teach nor suggest functionalization with a diazonium specie as stated in claim 97. Nor is there anything that motivates or suggests modifying the Smalley disclosure to do so. Thus, applicants submit that the Examiner has not presented a prima facie case of obviousness. Claims 98, 100, 104-109 and 134 depend either directly or indirectly from claim 97 and are thus patentable for at least the same reasons.

As to claim 135, the rejection is moot due to cancellation of this claim by amendment.

ATTORNEY DOCKET NO.
11321-P022WUD3

PATENT
Serial No. 10/632,284

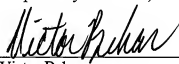
No new matter has been added. Applicant does not believe that any additional fee is due at this time. However, the Director is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account Number 23-2426 of WINSTEAD PC (referencing matter 11321-P022WUD3).

If the Examiner has any questions or comments concerning this paper or the present application in general, the Examiner is invited to call the attorney directly at the number given.

Dated:

7/16/07

Respectfully submitted,



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PATENT AGENT FOR APPLICANT

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. § 1.10

I hereby certify that the attached *Amendment, Election and Response Under 37 C.F.R. § 1.111* and *Petition for Extension of Time Under 37 C.F.R. 1.136(a)* are being electronically filed with the Patent and Trademark Office on the 16th day of July, 2007.

July 16, 2007 Cherita Hirstead
Date Signature